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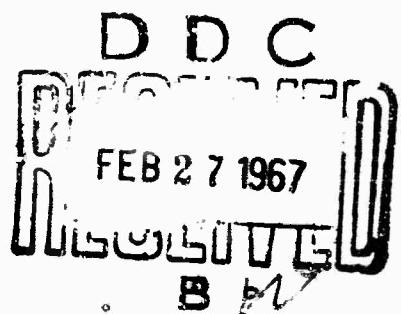


DEPARTMENT OF PSYCHOLOGY · UNIVERSITY OF ILLINOIS · URBANA, ILL.

LEADERSHIP STYLE AND THE PERFORMANCE  
OF CO-ACTING GROUPS

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TECHNICAL REPORT NO. 44  
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Communication, Cooperation, and Negotiation in Culturally Heterogeneous Groups  
Project Supported by the Advanced Research Projects Agency, ARPA Order No. 454  
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FRED E. FIEDLER, LAWRENCE M. STOLZOW, AND HARRY C. TRIANDIS  
Principal Investigators

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**Leadership Style and the Performance of Co-acting Groups**

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**ABSTRACT**

This paper reviews several studies of co-acting groups, that is, groups in which members typically do not interact with one another in performing a common task.

While relatively few data are available, they are quite consistent in showing that the task-oriented (low LPC) leader tends to perform better in situations which are relatively pleasant and free from anxiety while the relationship-oriented leader of co-acting groups tends to perform better in situations in which tension or anxiety is relatively high. These findings are discussed in terms of group member requirements for quasi-therapeutic interactions which typically provide little psychological group support for the individual member.

## Leadership Style and the Performance of Co-acting Groups

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Most leadership studies deal with "interacting" team situations, that is, with groups in which the members have to coordinate their activities and closely work together in the performance of a common task. Yet, a substantial proportion of groups in our society--perhaps even the majority-- are "co-acting" in nature. These are groups in which each individual performs his own job in relative independence from his co-workers. An example of an interacting group is a basketball team in which members must work together if they are to win the game. An example of a co-acting group is a bowling team since the performance of one member is almost completely independent of the performance of other team members. Each member, in effect, contributes to the group effort by adding his own score to that of his teammates.

Analogous co-acting team situations exist in business and industry. Consider, for example, the typical sales organization in which each salesman is given his own sales territory, or his own department within the store, and in which he is paid on a commission basis. Another example is the industrial work shop which operates on a piece rate basis. Aside from possible group norms governing output, the performance of one worker is only minimally affected by the performance of others. In addition, practically all classroom situations fall into the co-acting category: the performance of one student is relatively unaffected by the performance of others.

This paper discusses studies on co-acting groups which we have conducted over the past years. It attempts to identify leadership factors which influence the performance of these groups, and it seeks to determine the conditions under which certain types of leadership styles contribute to effective group output.

### The Function of the Leader in Co-acting Groups

One major difference between interacting and co-acting groups is readily apparent. Since the members of co-acting groups work on individual tasks, the leader will not need to concern himself with coordinating the activities of his subordinates. "Pure types" are, of course, rare. Some interacting tasks occur in most co-acting situations: several men may have to cooperate in moving supplies; several employees may on occasion be called upon to load a truck. But the typical co-acting task requires each man to work alone, and in the main, the leader's concern will be with each of his group members separately. The co-acting group may thus be conceptualized as a set of two-man teams consisting of the leader and his several subordinate group members. An understanding of these diadic relations seems, therefore, essential if we are to understand important aspects of the co-acting group.

Motivation, coordination, and supervision of group members. These "task related" leadership functions are essential to all types of formal groups, whether co-acting or interacting. It seems very likely, however, that the leader of the co-acting group to a greater extent will have to motivate each individual separately than will the leader of the interacting group. The interacting group frequently can be motivated as a whole since the members of interacting groups are locked together in a common task. If the leader can motivate key members of the group, the group pressure will tend to sweep along those members who are less highly motivated.

It is obvious that the leader's influence over the co-acting group will, for this reason, also differ from the leader's influence over interacting groups. This will be especially true in the case of informal leaders or leaders who enjoy a low degree of "position power" (Fiedler, 1964), i.e., the legitimate reward and punishment power which is inherent in the leadership position, irrespective of who occupies the office. Interacting groups, in which the leader has low position power, (for example groups with

emergent leaders), frequently recognize the need for someone who directs and coordinates the work on the common task. In the co-acting group, the need for coordination, and hence for leadership, is less apparent. Each man has his own job. (Compare again the basketball team and the bowling team.) Hence, in the co-acting group, members may be able to ignore a leader with low position power, and the leader with low position power will, therefore, tend to have much less direct influence over the co-acting group than he would have in the comparable interacting group situation. In groups in which the leader's position power is high, the differences between interacting and co-acting groups may be less pronounced.

Training. A second important leadership function in co-acting as well as interacting groups consists of training or teaching individual group members. However, the co-acting group demands, to a much greater extent, that the leader or supervisor, work directly with each group member separately. Consider, for instance, apprenticeship in a machine shop and in a riveting crew, or the training in rifle marksmanship teams and in basketball teams. In each case, the novice has to acquire certain basic skills. The training in co-acting groups is essentially complete when the individual has acquired the skill to perform his own task. However, in interacting teams, the individual must also be taught how to coordinate his own skills with those of his fellow team members.

Quasi-therapeutic functions (maintenance functions). Finally, an important function of leaders in many co-acting groups involves the reduction of anxiety. These "quasi-therapeutic" interactions (Fiedler, et. al., 1959; Hutchins and Fiedler, 1960; Julian, et. al., 1966; Myers, 1962) are defined as informal interpersonal relations among group members, or between the leader and a group member, which incidentally serve to increase the individual's ability to adjust.

The leader of the interacting group must concern himself with various group maintenance functions. The importance of the quasi-therapeutic relationship is likely to be greater in the co-acting than in the interacting group for two main reasons. First, the interacting group demands that the individual relate closely to others in the performance of a shared task, and that he interact with them in a wide variety of activities. He, therefore, shares with these others a host of experiences which closely tie him to the group, which make him "one of the boys."

Second, the team in interacting situations by definition needs each man in order to perform the common task. This implies that each man will be valued as an important contributor to the common task. He is, therefore, more likely to be wanted and appreciated by his fellow team members. This interdependence among group members tends to result in positive, accepting, and supportive relations which have been found to be adjustive and quasi-therapeutic (Fiedler, 1962)\*. In contrast, the co-acting group is less dependent upon each individual group members. In fact, continuous interactions among group members are neither required nor especially welcomed since they tend to interfere with individual work. As a result, the individual is more likely to isolate himself psychologically from his co-workers. He is, therefore, likely to be more vulnerable to maladjustive processes in the co-acting than in the interacting situation (Fiedler, 1962; Julian, et al., 1966).

The question to which this paper addresses itself concerns the specific leadership style which contributes to the performance of co-acting teams. We shall here summarize a number of studies which bear on this problem, although the results are suggestive rather than compelling.

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\*Also in R. S. Daniel, Contemporary Readings in General Psychology (Second Ed.). Boston: Houghton Mifflin Company, 1959.

### Measurement of Leadership Style

A program of research, conducted by the writer and his associates since 1951, has dealt wit<sup>n</sup> the relation of certain leadership styles to the performance of task groups (Fiedler, 1958, 1964, 1966a). The program utilized two measures of leadership style, the "Assumed Similarity between Opposites" (or the co-worker dimension) and the esteem for the "Least Preferred Co-worker" (LPC).

Assumed Similarity between Opposites (ASo) scores are obtained when we ask an individual to think of all co-workers he has ever had. He then describes the person with whom he could work best (his most preferred co-worker) and the person with whom he could work least well (his least preferred co-worker), on eight-point graphic rating scale items modeled after the Semantic Differential (Osgood, et al., 1957). (Note that this does not need to be someone with whom he works at the time.) The typical scale consists of 20 items such as the following:

Confident : 8 : 7 : 6 : 5 : 4 : 3 : 2 : 1 : Not Confident

Self-Assured: 8 : 7 : 6 : 5 : 4 : 3 : 2 : 1 : Not Self-Assured

Pleasant : 8 : 7 : 6 : 5 : 4 : 3 : 2 : 1 : Unpleasant

The Assumed Similarity between Opposites, or ASo, is obtained by means of the statistic D, the sum of squared differences in scores of corresponding items describing most and least preferred co-workers. The Least Preferred Co-worker Score, LPC, is obtained by simply summing the item scores on the description of the least preferred co-worker. By convention, the most favorable pole of each item is given a score of 8, the least favorable pole is given a score value of 1. Since ASo and LPC scores are correlated as much as the reliability of each of these scores allows, the two scores are interpreted in identical fashion. ASo scores were utilized in earlier work (1958); LPC scores have been used in more recent studies (1964, 1966b).

These scores, as we currently interpret them (Fiedler, 1966a) measure a "relationship-oriented" leadership style in the case of high LPC or ASo scores (favorable descriptions of LPC) and a "task-oriented" leadership style in the case of individuals who have low LPC or ASo scores (unfavorable ratings of LPC). Essentially, we have found that the high LPC or ASo person seeks close interpersonal relations and prominence in his group. In contrast, the low LPC or ASo leader obtains his major satisfactions from the performance of the task. Thus, when necessary, the high LPC leader is willing to forego task performance in order to obtain close interpersonal relations with his group members and prominence in his group; the low LPC leader is willing to forego, when necessary, good interpersonal relations in order to concentrate on task performance. High and low LPC or ASo leaders seek to satisfy different needs in the group situation. (For a more extended discussion, the reader is referred to Technical Report No. 33 of this project.)

Of particular importance in the interpretation of LPC scores is the repeated finding that high LPC persons, that is, those who describe their least preferred co-worker in favorable terms, tend to reduce anxiety in their group members, and they increase satisfaction of group members with their group. Being more concerned with interpersonal relations, they tend to be more considerate of the feelings of their group members, more concerned with their group members' opinions and attitudes, and hence more non-directive and permissive. In general, therefore, they tend to have a more quasi-therapeutic relationship with others.

Assumed Similarity scores were originally developed in studies of psychotherapeutic relations. Therapists with high Assumed Similarity (who perceived much similarity, hence little difference, between themselves and their patients) tended to be rated as more effective than were therapists with low Assumed Similarity, who perceived large differences between themselves and their patients (Fiedler, 1950). Hence, where quasi-therapeutic interactions

are required, as in highly anxiety arousing situations, the quasi-therapeutic leader should perform more effectively than his more task-oriented colleague.

A theoretical model, the so-called "Contingency Model" of leadership effectiveness, (Fiedler, 1964, 1966a) has recently been proposed by the writer. This model has now been supported in a number of studies (Fiedler, 1966a; Hunt, 1966; Shaw and Blum, 1966). It states that the effectiveness of an interacting group depends upon the appropriate matching of leadership style and the favorableness of the group situation for the leader. In situations which are either very favorable or unfavorable for the leader--in which the situation provides the leader with considerable influence over his members--or else those in which the situation provides very little opportunity to influence his members, the task-oriented, low LPC or ASo leader performs better. In situations intermediate in favorableness, the relationship-oriented, high LPC or ASo leader tends to perform relatively better than the leader with low scores.

The present paper, in part, extends the Contingency Model to co-acting groups. It asks about the specific conditions under which task-oriented or relationship-oriented leadership styles will result in more effective performance in co-acting groups.

#### Work Situations Presumed to Require Motivating Leaders

Hunt (1966) recently studied co-acting work groups in work shops in a large chemical research laboratory and a chain of supermarkets.

Hunt hypothesized that he would obtain the same relationships in co-acting groups as the relations which the Contingency Model would predict for interacting groups. The Contingency Model, described by the writer in several articles (1964, 1966a) states that the effectiveness of a group will be contingent upon the leader's style of interacting with his members and the

"favorableness" of the group situation. The favorableness of the situation was indexed in the original paper (Fiedler, 1964) by three operationally defined dimensions: (a) the degree to which the leader was accepted by the group, i.e. felt accepted; (b) the degree to which the task is structured and stated clearly versus tasks which are vague and ambiguous; and (c) the power with which the organization provides the leadership position, that is, the power to coerce, punish and reward the group members.

Industrial work shops. One set of eleven work shops had highly structured tasks and strong leader position power. He divided these groups into those in which the leader felt accepted (high group atmosphere) and those in which he did not feel accepted (low group atmosphere). On the basis of previous findings, Hunt predicted that the groups with high group atmosphere scores would show a negative correlation between leader LPC and group performance scores, while the relations in groups with low group atmosphere scores would be negative.

The men in these shops are highly skilled craftsmen capable of performing their jobs independently. Their work requires the fabrication of equipment and parts for basic research projects. Included in the sample were welding, optics, machine repair, and sheet metal shops as well as several service shops for first echelon maintenance. Also included were an inspection department and a tool and stock room. Each of the shops may be considered a small department supervised by a foreman.

Most of the jobs are highly structured, and work assignments are given to various specialists in the shop who are expected to perform their job independently of others. The position power of the foreman in these groups was rated as relatively high, and, as indicated before, the groups were divided on the basis of the foreman's group atmosphere scores.

The crafts shops were ranked by three raters familiar with their work. Ratings were made on (a) quality of the output, considering working

conditions, equipment, and other relevant factors; (b) quantity of output in terms of required deadlines; (c) attitudes of workers and grievances; and (d) an overall evaluation of shops based on the order in which supervisors would be selected if the evaluators had their own businesses. The inter-rater correlation among the three judges was quite high (.86, or .92 corrected for number of raters).

Supermarket grocery departments. Data were collected from 26 stores in the supermarket chain. (Produce departments and meat departments are managed separately and were not included.)

The jobs performed by store employees are primarily ~~co~~acting in nature. Food is unloaded, stored, marked, and shelved, customers are checked out and groceries are sacked and placed into customer cars. In addition, the store must be kept clean and neat, and the display shelves and cases must be kept attractive. Most of these jobs are performed by employees working alone. Where groups are engaged in interacting tasks, these tend to be of a very transitory nature.

The leader position power of the store managers was judged to be high, and the tasks were rated by company officials as being highly structured. The store manager's rating of the group climate indicated his relations with group members.

The grocery departments were evaluated by the company on the amount of sales per man hour. This appears to be a valid index for comparing stores of this supermarket chain.

On the basis of the Contingency Model, Hunt predicted, for both organizations, that the groups with high group atmosphere scores would show a negative correlation between leader LPC and group performance scores, while the correlations in groups with low group atmosphere scores would be positive.

Results. As in other studies, the LPC scores of shop foremen or of store managers were correlated with the performance ratings of their work units. (Table 1) The joint probability of obtaining this set of predicted correlations is highly significant (Gordon, et al., 1952). As can be seen, the correlations were in the expected direction, and of approximately the same magnitude as those obtained in the original set of data (Fiedler, 1964).

Hunt's work suggests that the interaction between leadership style and the group-task situation on performance is very similar in co-acting and in interacting work teams. This suggests that the major leadership function (presumably that of motivating the workers) is similar in co-acting and interacting groups with structured tasks and high position power, and that the Contingency Model may be applicable to this type of groups.

#### Co-acting Groups with Weak Leader Position Power

To what extent the Contingency Model can be generalized to other co-acting groups remains a question. Where the position power of the leader is very weak his influence over individual members of the group, and hence over their work performance, is likely to be minimal. This is suggested by the results of one study on bowling (DeZonia, 1958) which investigated 16 teams participating in a recreational league. The correlation between the team captain's ASo score and team performance turned out to be only .06.

An investigation of rifle teams (Myers, 1962) compared 30 three-man teams which were in competition with one another and 30 three-man teams in which competition was discouraged and de-emphasized. The leaders were identified by sociometric questionnaires administered during and after the study. Here, again, the correlations between leadership style and team performance scores were low and insignificant. We are inclined to believe that the leader's ability to control performance may be simply too tenuous in these situations to yield meaningful relationships. Neither bowling nor rifle marksmanship in the context of recreational activities are especially

Table I

Rank Order Correlations between Supervisor LPC Scores and Group  
 Performance for Co-acting Groups in Hunt's Study

Sample	Pleasant Group Climate		Tense, unpleasant Group Climate	
	N	Rho	N	Rho
Foremen of crafts shops	6	-.48	5	.90
Store managers of Supermarkets	13	-.06	11	.49
Obtained Median Correlations		-.27		.69
Expected Median Correlations		-.52		.42

Combined probability  $p < .01$  (one tailed) computed by Fisher's exact test (Gordon, et al., 1952).

anxiety producing situations, and quasi-therapeutic interaction between the leader and his members may, therefore, not contribute to performance.

#### Co-acting Training Groups in Relatively Tension Free Situations

There are very few studies thus far which relate LPC and ASo scores to the instructor's performance in classroom or training situations. One small study was conducted by J. E. Marse, using instructors of various sections of an undergraduate physics course and an undergraduate rhetoric course. Only those instructors were selected who were rated highly by their students. Their performance was evaluated by senior faculty members who had overall supervision of these courses.

The samples consisted of six accepted physics instructors and 18 accepted rhetoric instructors. The correlation between the physics instructors' ASo scores and their rated effectiveness was -.70; the correlation between the ASo scores of 18 accepted rhetoric instructors and their effectiveness ratings was -.36, neither of these is significant.

A second investigation of teaching effectiveness was conducted by DeZonia (1958) who worked with student teachers from eight different subject matter areas (foreign languages, English, mathematics, speech, agriculture, home economics, physical education for women, and science). The university faculty members in charge of these sections were asked to evaluate the performance of these student teachers. The degree to which these student teachers were accepted by their own pupils could not be established. None of the correlations was significant when he correlated rated teacher performance with the student teachers' ASo scores. Two of the correlations between teaching performance in Speech (.57) and English (-.55) were significant when DeZonia used a variant of ASo. These modified ASo scores required the student teacher to describe the most and the least preferred pupils he ever had. It is difficult at this point to interpret these results since the "teaching form" of the ASo score was not used in other studies.

Co-acting Groups in Anxiety Arousing Training Situations

Naval Aviation Cadets.<sup>1</sup> One major investigation was carried out in 1955 at the Naval Air Station at Saufley Field, Florida (Fiedler and Hutchins, unpublished). Naval aviation cadets were assigned to this naval air station as part of their officer candidate course after completing basic individual flight training.<sup>2</sup> Saufley Field provided the training in formation flying.

Students were assigned in order of their arrival to squadrons of 16 men, and each of these squadrons was further subdivided into eight-man squads which were the basic units of instruction. The formation flying maneuvers were taught according to a very detailed set of standards, and the instructors followed a highly structured syllabus.

Tight formation flying is potentially dangerous, and it was especially anxiety arousing for these inexperienced student pilots. In addition, of course, the high failure rates, typical of officer candidate schools, further contributed to the anxiety of the cadets in the program.

Since the flight's performance was based on the average performance scores of each of the student pilots, rather than on the evaluation of the entire flight, the groups were clearly co-acting. In fact, the emphasis in training the pilots was on their ability to fly formation with any other pilots. Team performance as such was not stressed.

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<sup>1</sup>This study was conducted in collaboration with Dr. E. B. Hutchins, then at the University of Illinois, and Drs. Joseph DeRivera and W. R. Webb, then with the School of Naval Aviation Medicine, Pensacola, Florida.

<sup>2</sup>The flights also contained a small number of junior officers and cadets from foreign countries. These were given no special treatment.

A group of five or six instructors was assigned to each squadron. A senior instructor was designated by the school on the basis of his flying ability and experience in flight instruction. He was in charge of the squadron during its six-week training course. The senior instructor was, thus, the formal leader of the squadron and, in view of his responsibilities and control over group activities, he can be considered to have high position power.

In addition, we also identified an informal leader of each flight by means of two sociometric preference questions which asked each student pilot to name the man whom he would most prefer as combat leader and whom he would most prefer as his wing-man in combat. These informal leaders were identified at the termination of training. These men had no formal authority or functions in their flights. Their leader position power was, therefore, extremely weak.

The criterion measure considered to be most valid by Navy officers, as well as the most reliable, was a combination of two scores: (a) the sum of "check-flight" scores which the student received from examining flight instructors with whom he had not previously worked, and (b) the number of so-called "non-check downs" indicating the standard flight maneuvers the student performed satisfactorily after each phase of training and for which he, therefore, did not require additional training.

The reliability of squad scores was obtained by a variant of the split-half method of correlating the individual performance scores of one half of the men in each flight with the performance scores of the other half of the flight. We obtained two samples several months apart. The performance scores obtained in the first sample had a reliability of .47. The reliability of the second sample was .32. Neither of these, of course, is very satisfactory. A more detailed inquiry about this discrepancy in reliability scores revealed that there had been a shortage of flight instructors at the

time of the data collection for the second sample, and that the range of scores for this second sample was considerably smaller than that of the first (40.4 vs. 51.0).

Assumed Similarity between Opposites (ASo) scores were obtained from all available student pilots and instructors at the beginning of each training cycle. These scores were then correlated with the average performance score of each man in the flight or in the squadron.

The first sample consisted of 22 flights. The ASo score of the flight's informal leader (that is, the man who was sociometrically most chosen by his fellow group members) correlated with the flight performance score .55 ( $p < .02$ ) exclusive of the informal leader's own performance score. (The ASo of the informal leader and his own performance correlated .10.)

The attrition in these flights was considerable since a substantial number of students failed the course, resigned, or had to repeat the training because of illness or emergency leave. A correlation was, therefore, computed for the sub-sample of 17 flights in which the attrition rate was less than 50 per cent. The resulting rank order between informal leader ASo and the flight's performance was .70 ( $p < .01$ ).

A correlation was also computed between the ASo score of the formal leader of the squadron, that is, the senior flight instructor, and the performance of the squadron which he supervised. This correlation was .45 for 15 squadrons ( $p < .10$ ).

A second sample of 15 flights was obtained later during that year, and as already indicated, the performance scores were of lower reliability. As expected, therefore, the correlations between leader ASo and performance was also correspondingly lower. The correlation between the informal leader's ASo score and the flight's performance was .28 (n.s.).<sup>3</sup>

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<sup>3</sup>n.s. = statistically not significant.

Using only the 12 flights with less than 50 per cent attrition, the correlation rose to .32 (n.s.). The correlations between the senior instructor's ASo score and the squadron criterion for 16 squadrons was .17 which is, of course, not significant, although both validation results were in the hypothesized direction.

If we consider both samples, the results indicate, especially in the case of informal leaders, that the men in the flights performed more effectively if the leader was relationship-oriented (high ASo) and presumably quasi-therapeutic in his interactions.

#### Co-acting Groups with Creative Tasks.

A study was conducted by Anderson and Fiedler (1964) which involved 30 groups of four men, each, from the Naval Reserve Officer Training Program at the University of Illinois. These groups (matched for intelligence) were given a variety of tasks under two types of leadership conditions. One set of 15 groups was told that the leaders should participate in the discussion of various problems. The other set of 15 groups were instructed that the leader was to confine himself to supervisory functions only. He could make procedural suggestions, he could evaluate ideas and proposals, but he was not permitted to contribute directly to the substantive problems which the groups were given.

The members of these groups were NROTC cadets in their freshmen or sophomore year, while the leaders were cadets in their senior year. The leaders were given relatively high position power which was reinforced by the presence of Navy officers as well as the explicit statement that the group exercises were part of the regular leadership course of the NROTC program. Although we had not intended this side effect, the leaders of these groups felt under considerable pressure, and therefore, reported to be relatively tense and anxious throughout the experimental tasks.

One of the tasks required the group to invent ten unusual and unique uses for each of two common objects, namely, a wire coat hanger and a ruler. (Guilford, 1957). The creativity of the groups was determined by frequency with which a given response occurred in any of the 30 groups. The less frequent the response, the higher the score. The scores for these two sub-tasks correlated .60 ( $p < .01$ .)

This particular task is quite similar to a co-acting situation. Each of the group members was required to think up one or more unusual uses for each of the objects. These suggestions were then pooled. Where the pool of suggestions exceeded ten "uses" per object, the group was required to interact in order to choose among the suggested "unusual uses."

The LPC score of the leader was correlated with the group performance in each of the two conditions, that is, the "participatory" and the "supervisory" leadership condition. (A pooling of these two sets of groups was not appropriate since the participatory groups consisted of four members, the supervisory groups consisted of only three members who were permitted to contribute items.) The correlations between leader LPC and performance were .63 ( $p < .02$ ) for the participatory groups and .31 (n.s.) for the supervisory groups, respectively. The joint probability of these two correlations is, of course, also significant. Thus, these groups with unstructured tasks and leaders with relatively high position power, and operating under anxiety arousing situations, performed better under quasi-therapeutic, relationship-oriented (high LPC) leaders than under task-oriented (low LPC) leaders.

### Discussion

While it must be re-emphasized that our understanding of co-acting groups leaves much to be desired, the relations which have been obtained between leadership style and group performance are beginning to form a meaningful pattern. A summary of results obtained in co-acting group-task situations is presented in Table 2.

As can be seen, we have classified the groups on the basis of the leader's position power and on the basis of the presumed stressfulness of the situation. It is not yet clear whether the more typical work groups, and the training or teaching situation in which the instructor holds a position analogous to the leader, should be combined. We have done so here although pooling of these groups may have been premature.

The data which are available provide a very consistent pattern. The effective leaders (or instructors) of groups with high position power and pleasant, non-threatening group climate tended to be task-oriented, low LPC or low ASO persons. While the individual correlation coefficients are low and insignificant, all were in the negative direction.

In contrast, all of the six correlation coefficients in groups having tense or anxiety arousing group climate and high position power were in the positive direction. This suggests that the relationship-oriented, quasi-therapeutic leaders perform better under these more stressful conditions. This is also shown in groups in which the leader position power is low. The trend is stronger in groups which were in highly anxiety arousing situations, that is, the aviation cadets and the Navy ROTC groups.

The relationships in groups with pleasant group climate but low position power were negligible. This, in retrospect, does not seem too surprising. The leader who has little or no authority is not in a position to direct or advise; he cannot even train people or give them special instruction.

**Table 2**  
**Summary of Results Obtained in Studies of Co-Acting Groups**  
**Correlations Between Leadership Style (LPC or ASo)**  
**and Group Performance**

<u>Position Power</u> High	<u>Group Climate</u>	
	Pleasant - Nonstressful	Unpleasant - Stressful
<u>Task Groups</u>		
Work Shops	6	-.48
Supermarkets	13	-.06
<u>Task Groups with Unstructured Tasks</u>		
(NROTC Study) Participatory		
groups leadership	.	.15
Supervisory leadership	.	.15
<u>Training or Teaching Situations</u>		
Physics Instructors	6	-.70
Rhetoric Instructors	12	-.36
<u>Anxiety Arousing Training Situation</u>		
Navy Pilot Instructors-Sample I	15	.45
Navy Pilot Instructors-Sample II	16	.17
<hr/>		
<u>Position Power</u> Low		
<u>Task Groups</u>		
Bowling Teams	16	.06
Rifle Teams	30	.18
		.30
		-.19

Table 2  
(Continued)

<u>Position Power</u>	<u>Pleasant - Nonstressful</u>	<u>Unpleasant - Stressful</u>
<u>Low</u>		
<u>Anxiety Arousing Training Situation</u>		
Informal Navy Flight Leaders-Sample I	22	.55
Informal Navy Flight Leaders-Sample II	15	.28

Only when the group member anxiety rises to the critical point where help is urgently sought and gladly accepted would it seem that the leader with low position power can provide assistance by reducing tension and anxiety, and by exerting a generally calming influence.

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### 13. ABSTRACT

✓ This paper reviews several studies of co-acting groups, that is, groups in which members typically do not interact with one another in performing a common task.

While relatively few data are available, they are quite consistent in showing that the task-oriented (low LPC) leader tends to perform better in situations which are relatively pleasant and free from anxiety while the relationship-oriented leader of co-acting groups tends to perform better in situations in which tension or anxiety is relatively high. These findings are discussed in terms of group member requirements for quasi-therapeutic interactions which typically provide little psychological group support for the individual member.

### 14. KEY WORDS

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